

(FILE 'HOME' ENTERED AT 13:00:25 ON 17 FEB 2004)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:00:38 ON 17 FEB 2004

L1	31 S PADLOCK (S) PROBE
L2	18 DUP REM L1 (13 DUPLICATES REMOVED)
L3	2 S L2 NOT PY>=1997
L4	58218 S ANTISENSE
L5	208 S L4 (S) HYBRIDIZE
L6	3 S L5 (P) "DOUBLE STRAN

ANSWER 1 OF 2 MEDLINE on STN  
 ACCESSION NUMBER: 97128254 MEDLINE  
 DOCUMENT NUMBER: 97128254 PubMed ID: 8972847  
 TITLE: Synthesis of full-length oligonucleotides: cleavage of apurinic molecules on a novel support.  
 AUTHOR: Kwiatkowski M; Nilsson M; Landegren U  
 CORPORATE SOURCE: Department of Medical Genetics, Uppsala University, Sweden.. marek.kwiatkowski@medgen.uu.se  
 SOURCE: NUCLEIC ACIDS RESEARCH, (1996 Dec 1) 24 (23) 4632-8.  
 Journal code: 0411011. ISSN: 0305-1048.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
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AB The synthesis of oligodeoxynucleotides is marred by several problems that contribute to the formation of defective molecules. This in turn seriously limits the usefulness of such reagents in DNA diagnostics, molecular cloning, DNA structural analysis and in antisense therapy. In particular, depurination reactions during the cyclical steps of synthesis lead to strand scission during cleavage of the completed molecules from the support. Here we present a remedy to this problem: a novel disiloxyl linkage that connects oligonucleotides to the support withstands reaction conditions that allow the removal of the 5' parts of any depurinated molecules. This ensures that all molecules that preserve the 5' protecting group when cleaved from the support will have both correct 3'- and 5'-ends. We demonstrate the application of the support for synthesis of **padlock probe** molecules.

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 on STN

ACCESSION NUMBER: 96132238 EMBASE  
 DOCUMENT NUMBER: 1996132238  
 TITLE: Detecting genes with ligases.  
 AUTHOR: Landegren U.; Samiotaki M.; Nilsson M.; Malmgren H.; Kwiatkowski M.  
 CORPORATE SOURCE: Department of Medical Genetics, Uppsala Biomedical Center, Box 589, S-75123 Uppsala, Sweden  
 SOURCE: Methods: A Companion to Methods in Enzymology, (1996) 9/1 (84-90).  
 ISSN: 1046-2023 CODEN: MTHDE  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 022 Human Genetics  
 029 Clinical Biochemistry  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English

AB The combination of synthetic oligonucleotide probes and DNA ligases is central to several recently developed genetic assays. Among the advantages of ligase-mediated gene detection is that ligation of **probe** pairs provides highly specific detection of unique DNA sequences in genomic samples. The technique also allows for convenient distinction between sequence variants, since mismatched bases at the junction of the **probe** pair prevent ligation. Moreover, the circumstance that two probes are joined into one molecule can be exploited for detection in several ways, for instance by observing the change in **probe** size upon ligation. Alternatively, a detectable function on one **probe** can be demonstrated to become linked to a retrievable function on another one through ligation. Ligation products can also be recruited as templates for subsequent ligation reactions in powerful amplification schemes.

So-called **padlock** probes lock to their targets by encircling them, remaining in place even after denaturing washes. Here, we will describe two ligase-mediated assays: one that serves to monitor the presence of common sequence variants in amplified samples of genomic DNA and another that is suitable to detect localized gene sequences.

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